B4
V33
no.70

UNITED STATES NAVAL OBSERVATORY

CIRCULAR NO. 70

U. S. Naval Observatory, Washington 25, D. C. October 1, 1956

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS
MAY, 1956

By Winifred Sawtell Cameron

These results are based upon measurements made at the Naval Observatory on plates secured either there or at the Mt. Wilson Observatory. The symbols used for the entries in the successive columns are as follows:

U.T., the epoch of observation in Universal Time.
No., the identifying number of the group assigned by Mt. Wilson.
Δl, the heliographic difference in longitude from the central meridian, measured positive to the west.
φ, the heliographic latitude, measured positive to the north.
ρ, the heliocentric angular distance from the line joining the centers of the Earth and Sun.
A, the true area of the umbra plus penumbra, expressed in millionths of the visible hemisphere.
s, the number of spots.

An asterisk means that no Mt. Wilson number was assigned. Plates secured at the Naval Observatory are indicated by N, and those at Mt. Wilson by M. The plate quality, which follows, is indicated by:

1, Poor; 2, Fair; 3, Good; 4, Very Good; 5, Excellent.

The following five quantities are listed successively at the end of each day, and give for that day:

1. The total number of groups, g.
2. The longitude of the central meridian, L_0.
3. The latitude of the center of the disc, B_0.
4. The total value of A.
5. The total value of s.

The mean daily area and the mean relative sunspot number, $r=10g+s$ are given at the end of the month.

These results are a continuation of those published in the *Monthly Weather Review* from February 1, 1927 to December 31, 1947.

MAY

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
1.566	11603	−75	+14	76	582	3
N–2	11603	−73	+15	75	194	1
	11603	−66	+16	69	727	1
	11602	−66	+22	70	48	2
	11602	−61	+24	65	36	1
	11600	−64	−23	65	73	1
	11600	−63	−24	64	16	1
	11600	−57	−20	58	48	1
	11600	−56	−19	57	242	1
	11601	−19	−18	24	97	1
	11601	−18	−17	23	73	1
	11601	−16	−16	21	73	2
	11601	−14	−16	18	32	1
	11596	+38	−14	40	194	3
	11596	+41	−14	42	24	1
	11596	+42	−15	43	109	1
	11596	+44	−14	45	97	2
	11590	+40	+25	49	61	1
	(6)	(283)	(−4)		2726	25
2.706	11606	−85	+24	86	339	1
M–3	11605	−79	+17	79	48	1
	11604	−71	+18	74	121	1
	11604	−69	+17	72	158	1
	11603	−58	+15	61	218	1
	11603	−57	+14	60	121	3
	11603	−56	+16	59	36	2
	11603	−55	+16	57	73	3
	11603	−55	+18	58	32	2
	11603	−55	+17	58	32	4
	11603	−52	+18	56	16	6
	11603	−49	+16	53	533	4
	11602	−49	+23	55	61	2
	11602	−45	+24	52	32	1
	11600	−48	−22	51	16	2
	11600	−47	−23	51	16	2
	11600	−41	−19	43	182	2
	11601	− 5	−18	16	73	2
	11601	− 4	−17	15	24	6
	11601	− 3	−18	15	24	4
	11601	− 1	−17	14	12	1
	11601	0	−16	14	48	6
	11601	+ 1	−16	13	73	1
	11596	+52	−15	53	73	3
	11596	+53	−14	54	36	3
	11596	+55	−15	56	24	1
	11596	+56	−16	57	12	2
	11596	+59	−16	60	194	1
	11590	+54	+23	59	32	2
	(9)	(268)	(−4)		2659	70
3.672	11606	−72	+24	75	267	1
M–2	11605	−70	+15	73	24	2
	11605	−66	+16	69	12	2
	11605	−65	+17	67	12	1
	11605	−65	+16	67	16	2
	11604	−60	+16	63	12	1
	11604	−59	+17	63	73	2
	11604	−56	+16	59	85	1
	11603	−46	+14	50	194	1
	11603	−44	+13	47	170	3
	11603	−44	+15	47	73	3
	11603	−43	+17	47	73	6
	11603	−43	+15	46	97	7
	11603	−41	+17	45	97	5
	11603	−39	+16	44	48	3
	11603	−38	+15	43	145	1
	11603	−37	+16	42	73	3
	11603	−37	+14	41	16	1
	11603	−36	+18	42	16	2
	11603	−35	+15	39	242	2
	11603	−33	+15	37	12	2
	11602	−36	+22	44	24	4
	11602	−34	+24	44	24	1
	11600	−33	−23	38	16	7
	11600	−27	−20	31	194	1
	11609	− 7	−13	12	24	2
	11609	− 6	−11	9	12	1
	11609	− 4	−12	8	16	1
	11601	+ 7	−18	16	73	4
	11601	+ 8	−18	16	73	12
	11601	+11	−16	16	16	2
	11601	+12	−16	17	24	4
	11601	+13	−15	17	16	1
	11601	+14	−15	18	36	1
	11608	+15	−28	29	12	1
	11608	+16	−28	29	12	2
	11607	+55	+23	60	16	1
	11607	+58	+22	61	24	2
	11607	+66	+24	70	16	1
	11596	+66	−14	66	16	1
	11596	+67	−14	67	36	2
	11596	+73	−15	73	145	3
	(11)	(256)	(−4)		2582	105
4.659	11606	−59	+26	65	388	1
N–2	11605	−59	+18	62	16	1
	11605	−56	+19	59	24	1
	11604	−52	+19	56	48	1
	11604	−51	+20	55	24	1
	11604	−46	+19	51	121	1
	11604	−42	+18	47	121	1
	11603	−31	+15	35	339	2
	11603	−30	+16	36	73	1
	11603	−30	+19	37	73	1
	11603	−27	+19	35	145	4
	11603	−25	+17	32	145	3
	11603	−24	+18	32	121	3
	11603	−23	+21	33	16	1
	11603	−21	+17	29	267	1
	11602	−19	+25	34	32	1
	11600	−14	−19	22	218	1
	11609	+ 5	−10	7	48	1
	11609	+ 7	− 9	9	24	2
	11609	+ 8	−10	11	24	1
	11601	+22	−16	25	121	2
	11601	+25	−15	26	24	1
	11601	+26	−14	27	16	1
	11601	+29	−13	31	48	1
	11608	+27	−27	35	61	1
	11608	+32	−26	38	24	1
	11608	+33	−25	38	48	1
	(9)	(243)	(−4)		2609	37

MAY

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
5.535	11612	−86	−21	86	145	1
N−2	11606	−48	+24	54	364	1
	11605	−42	+17	46	61	1
	11605	−40	+17	45	16	1
	11605	−39	+17	44	36	1
	11604	−34	+17	40	73	1
	11604	−30	+16	36	121	1
	11603	−20	+18	29	16	1
	11603	−19	+14	26	291	3
	11603	−18	+15	26	48	1
	11603	−17	+18	27	73	2
	11603	−16	+18	26	24	1
	11603	−15	+18	26	194	3
	11603	−14	+23	30	16	1
	11603	−13	+16	24	242	3
	11603	−11	+16	23	48	2
	11603	− 9	+16	23	291	1
	11602	− 7	+25	30	36	1
	11600	− 4	−20	17	218	1
	11601	+34	−17	36	85	2
	11608	+39	−27	44	73	1
	11608	+40	−26	45	61	1
	11608	+44	−26	48	121	1
	11608	+45	−25	49	109	1
	(9)	(231)	(−4)		2762	33
6.593	11613	−80	−23	80	485	1
N−1	11612	−70	−21	70	242	1
	11606	−35	+24	44	388	1
	11605	−29	+16	35	97	2
	11605	−27	+18	34	121	1
	11605	−25	+18	33	145	1
	11604	−19	+18	30	97	1
	11604	−16	+17	26	182	1
	11603	− 6	+14	19	364	2
	11603	− 3	+19	24	339	3
	11603	+ 1	+16	20	315	1
	11603	+ 4	+16	21	388	1
	11600	+10	−19	18	218	1
	11608	+52	−27	55	121	1
	11608	+59	−25	61	339	1
	(8)	(217)	(−4)		3841	19
7.515	11613	−78	−23	78	73	2
N−4	11613	−66	−23	67	121	1
	11614	−75	−33	76	194	3
	11612	−57	−21	60	182	1
	11616	−33	−29	41	32	1
	11616	−30	−27	37	32	1
	11615	−31	+14	35	12	1
	11615	−29	+15	34	16	1
	11606	−23	+25	36	315	1
	11606	−22	+26	36	6	1
	11605	−17	+17	26	32	3
	11605	−16	+18	26	16	3
	11605	−13	+19	26	145	6
	11604	− 7	+16	21	16	1
	11604	− 6	+19	23	24	1
	11604	− 4	+17	21	97	1
	11603	+ 6	+16	20	48	3
	11603	+ 6	+14	19	218	2
	11603	+ 7	+18	23	16	1
	11603	+ 8	+15	21	24	2
	11603	+ 9	+20	25	194	7
	11603	+ 9	+17	23	24	1
	11603	+11	+21	25	73	2
	11603	+12	+21	26	32	3
	11603	+13	+18	25	291	4
	11603	+15	+17	25	339	1
	11600	+23	−18	27	194	2
	11608	+64	−26	67	97	1
	11608	+70	−24	72	291	3
	(11)	(205)	(−3)		3154	60
8.516	11619	−85	−31	85	194	1
N−3	11619	−84	−28	84	61	2
	11619	−83	−27	83	291	1
	11613	−62	−22	64	73	3
	11613	−54	−23	56	145	1
	11614	−60	−32	64	145	1
	11612	−45	−20	46	194	1
	11616	−21	−29	34	24	1
	11616	−19	−29	33	16	1
	11616	−16	−27	29	32	1
	11616	−15	−26	27	24	1
	11615	−17	+15	25	16	1
	11606	−10	+26	31	291	2
	11605	− 5	+18	22	48	2
	11605	− 4	+20	24	36	2
	11605	− 2	+21	23	12	1
	11605	0	+21	23	121	6
	11604	+ 6	+19	23	24	1
	11604	+ 9	+18	23	73	2
	11603	+18	+17	27	16	1
	11603	+19	+15	26	194	3
	11603	+19	+16	27	36	1
	11603	+22	+20	32	170	6
	11603	+23	+17	31	24	1
	11603	+24	+21	34	242	7
	11603	+26	+18	34	242	4
	11603	+29	+17	36	339	1
	11600	+34	−16	36	24	1
	11600	+35	−17	37	194	2
	(11)	(192)	(−3)		3301	58
9.506	11619	−70	−27	70	97	2
N−4	11619	−70	−29	71	73	1
	11619	−70	−32	71	48	1
	11619	−66	−27	67	48	3
	11618	−58	+16	61	36	1
	11613	−48	−23	51	36	2
	11613	−40	−23	44	145	1
	11614	−47	−32	53	61	2
	11612	−31	−20	34	145	1
	11620	−23	−16	26	32	2
	11620	−22	−16	26	48	4
	11620	−21	−14	24	48	2
	11615	− 4	+15	19	16	3
	11616	− 2	−27	25	6	1
	11616	0	−26	24	12	1
	11606	+ 1	+27	31	6	1
	11606	+ 3	+26	30	291	2

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U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	11605	+ 7	+19	24	24	3
	11605	+ 9	+20	25	109	5
	11605	+ 9	+18	24	48	6
	11605	+12	+18	24	16	3
	11605	+13	+21	26	145	10
	11605	+14	+20	27	12	1
	11604	+20	+19	31	6	1
	11604	+23	+18	32	73	4
	11603	+31	+17	37	6	2
	11603	+33	+15	37	158	6
	11603	+34	+17	39	12	2
	11603	+35	+20	41	24	2
	11603	+37	+22	43	32	3
	11603	+37	+21	43	145	7
	11603	+39	+19	44	242	4
	11603	+42	+17	46	339	1
	11600	+46	−16	47	12	1
	11600	+48	−16	50	194	1
	(13)	(178)	(−3)		2745	92
10.710	11622	−72	−21	72	388	1
N−1	11619	−57	−28	61	48	1
	11619	−56	−29	60	48	1
	11618	−40	+18	44	48	1
	(*)	−34	−15	36	24	1
	11614	−31	−31	39	48	1
	11613	−25	−21	30	133	1
	11612	−16	−19	24	145	1
	11620	− 8	−14	14	170	1
	11620	− 3	−14	12	194	1
	11606	+20	+25	34	315	1
	11605	+25	+20	34	97	1
	11605	+26	+17	33	145	1
	11605	+26	+21	35	121	4
	11605	+27	+17	33	48	2
	11605	+31	+20	37	436	3
	11604	+41	+17	45	48	1
	11603	+50	+14	53	145	1
	11603	+56	+17	59	194	1
	11603	+59	+16	63	291	1
	11600	+64	−18	65	145	1
	(13)	(163)	(−3)		3231	27
11.562	11622	−62	−21	64	36	1
M−3	11622	−62	−18	64	16	2
	11622	−59	−20	61	291	1
	11621	−45	+31	54	145	4
	11621	−44	+28	53	24	4
	11621	−41	+31	51	97	3
	11621	−39	+29	49	170	3
	11619	−44	−28	49	16	1
	11619	−43	−27	48	16	3
	11619	−41	−27	46	12	1
	11618	−29	+17	36	12	1
	11618	−28	+17	35	24	1
	11613	−14	−21	22	109	1
	11612	− 4	−19	17	158	2
	11620	+ 3	−15	13	182	1
	11620	+ 4	−14	13	24	2
	11620	+ 5	−16	14	36	2
	11620	+ 7	−15	15	194	4

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	11606	+30	+24	40	242	1
	11605	+35	+17	40	48	4
	11605	+36	+19	42	145	9
	11605	+36	+16	40	121	8
	11605	+39	+21	45	6	1
	11605	+41	+18	45	339	5
	11605	+42	+16	45	97	1
	11604	+51	+16	54	16	1
	11623	+56	+23	61	16	4
	11623	+57	+23	62	12	1
	11623	+60	+23	64	16	1
	11603	+59	+13	62	16	2
	11603	+60	+13	63	24	3
	11603	+66	+16	67	145	4
	11603	+69	+15	70	291	1
	11600	+76	−19	77	145	1
	(13)	(151)	(−3)		3241	84
12.863	11622	−44	−20	46	388	1
N−3	11621	−29	+32	44	291	3
	11621	−26	+29	41	218	5
	11621	−26	+33	43	97	2
	11621	−24	+31	41	436	7
	11621	−21	+30	38	242	2
	11618	−11	+17	23	16	1
	11613	+ 2	−21	18	145	1
	11612	+13	−19	21	133	1
	11620	+19	−17	24	97	3
	11620	+19	−15	23	194	1
	11620	+24	−15	26	97	3
	11620	+25	−15	27	194	2
	11606	+47	+24	53	291	1
	11605	+53	+18	56	73	3
	11605	+54	+20	58	36	1
	11605	+54	+16	57	218	3
	11605	+56	+20	60	36	1
	11605	+59	+19	63	291	2
	11605	+60	+16	63	24	2
	11605	+62	+16	64	145	1
	(8)	(134)	(−3)		3662	46
13.601	11622	−34	−22	37	388	1
N−2	11621	−21	+29	37	170	1
	11621	−21	+31	38	61	2
	11621	−18	+27	35	97	1
	11621	−17	+31	37	24	1
	11621	−16	+31	36	36	1
	11621	−16	+28	35	242	4
	11621	−15	+30	36	388	4
	11621	−13	+29	34	242	1
	11624	− 9	+17	23	24	1
	11624	− 6	+17	22	24	1
	11618	− 1	+17	20	16	1
	11613	+14	−21	23	109	1
	11612	+23	−19	28	145	1
	11620	+29	−16	33	97	2
	11620	+30	−14	33	242	1
	11620	+31	−15	33	24	1
	11620	+33	−14	34	24	2
	11620	+35	−14	36	194	4
	11620	+36	−15	37	61	2

MAY

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	11606	+56	+26	61	436	1
	11605	+64	+23	66	48	2
	11605	+65	+19	67	170	1
	11605	+68	+22	70	291	1
	11605	+71	+20	74	97	1
	(9)	(124)	(−3)		3650	39
14.512	11622	−21	−22	26	388	1
N−5	11621	−12	+31	35	194	3
	11621	−11	+29	34	32	4
	11621	− 8	+31	34	24	4
	11621	− 7	+28	32	97	3
	11621	− 6	+31	34	24	2
	11621	− 5	+29	33	242	6
	11621	− 5	+27	31	85	3
	11621	− 3	+29	33	267	2
	11625	− 6	−30	28	12	2
	11613	+26	−20	31	109	1
	11612	+35	−18	37	97	1
	11620	+40	−15	42	24	4
	11620	+41	−16	42	32	3
	11620	+41	−14	42	194	2
	11620	+44	−14	45	24	3
	11620	+46	−14	47	121	2
	11620	+47	−14	48	12	2
	11606	+66	+26	70	315	1
	11605	+72	+24	76	12	1
	11605	+75	+21	77	97	1
	11605	+80	+23	80	291	3
	(8)	(112)	(−3)		2693	54
15.510	11626	−67	+26	71	12	1
N−4	11622	− 7	−21	19	339	2
	11621	+ 2	+31	34	97	2
	11621	+ 3	+32	34	85	3
	11621	+ 3	+30	33	48	2
	11621	+ 4	+31	34	121	7
	11621	+ 5	+29	33	61	1
	11621	+ 6	+32	35	12	1
	11621	+ 6	+29	33	48	1
	11621	+ 7	+30	34	206	3
	11621	+ 7	+28	32	97	4
	11621	+11	+30	34	218	1
	11625	+ 6	−31	28	48	2
	11625	+ 7	−32	29	16	1
	11613	+39	−20	42	97	1
	11612	+47	−17	49	109	1
	11620	+55	−13	56	267	3
	11620	+55	−14	56	6	1
	11620	+57	−14	58	16	1
	11620	+60	−14	62	145	3
	11606	+85	+26	85	291	1
	(8)	(99)	(−3)		2339	42
16.558	11627	−78	−24	79	61	2
N−5	11627	−75	−23	76	97	3
	11626	−59	+26	64	24	2
	11626	−54	+25	59	16	3
	11622	+ 6	−19	19	388	1
	11621	+15	+33	37	97	3
	11621	+16	+34	39	73	2
	11621	+18	+33	38	145	9
	11621	+19	+31	36	85	1
	11621	+19	+34	40	12	1
	11621	+20	+31	37	36	3
	11621	+22	+32	39	145	3
	11621	+23	+31	39	97	4
	11621	+23	+33	40	73	3
	11621	+25	+32	41	194	1
	11625	+19	−29	34	12	3
	11613	+53	−18	55	97	1
	11612	+61	−16	63	97	1
	11620	+69	−13	69	24	2
	11620	+69	−11	69	158	1
	11620	+72	−12	72	24	1
	11620	+74	−12	74	48	2
	(8)	(85)	(−2)		2003	52
17.510	11627	−68	−24	70	97	1
N−2	11627	−66	−24	68	97	1
	11627	−65	−25	66	48	1
	11627	−63	−24	65	109	1
	11627	−61	−24	64	121	2
	11626	−40	+25	46	48	1
	11626	−35	+24	43	12	1
	11631	−37	+31	47	12	1
	11628	+18	+26	34	12	1
	11628	+21	+26	34	12	1
	11628	+23	+26	35	16	1
	11622	+19	−19	26	388	1
	11621	+25	+31	40	48	1
	11621	+26	+34	43	73	2
	11621	+27	+32	42	97	1
	11621	+28	+33	44	73	1
	11621	+30	+32	44	170	3
	11621	+31	+31	44	121	3
	11621	+33	+31	45	73	1
	11621	+34	+32	46	218	2
	11621	+35	+31	46	24	1
	11621	+35	+33	48	73	2
	11621	+36	+30	46	97	1
	11621	+36	+32	47	194	1
	11624	+45	+24	51	36	1
	11624	+49	+24	55	12	1
	11624	+50	+24	55	12	1
	11613	+65	−17	66	97	1
	11612	+73	−16	73	109	1
	11620	+81	−11	81	145	1
	(10)	(73)	(−2)		2644	38
18.508	11632	−80	−22	80	121	1
N−3	11627	−56	−27	61	36	3
	11627	−51	−27	55	24	2
	11627	−51	−26	54	97	1
	11627	−51	−25	54	16	1
	11627	−49	−26	53	145	5
	11627	−47	−24	51	24	1
	11627	−47	−25	51	73	1
	11626	−34	+25	42	48	5
	11626	−29	+24	38	12	3
	11626	−27	+24	36	16	2

MAY

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	11631	−15	+31	35	16	2
	11629	+30	−26	36	12	1
	11629	+30	−24	36	12	3
	11629	+31	−25	36	16	1
	11622	+33	−18	36	388	1
	11628	+36	+28	45	24	1
	11621	+39	+34	51	73	1
	11621	+40	+35	52	97	1
	11621	+42	+34	53	218	4
	11621	+43	+35	55	36	2
	11621	+44	+34	55	32	3
	11621	+45	+35	56	145	2
	11621	+45	+32	55	16	3
	11621	+47	+32	56	12	1
	11621	+47	+34	57	218	1
	11630	+54	−21	56	16	2
	11630	+55	−21	57	16	1
	11630	+56	−20	58	16	1
	11624	+56	+27	62	32	2
	11624	+60	+26	65	12	1
	11624	+64	+26	68	73	1
	11613	+79	−14	79	97	1
	(11)	(59)	(−2)		2189	61
19.555	11632	−66	−20	67	97	1
N−2	11627	−43	−25	46	61	1
	11627	−37	−23	42	97	2
	11627	−36	−25	41	36	1
	11627	−35	−24	40	145	1
	11627	−34	−23	39	121	2
	11626	−19	+28	35	36	1
	11626	−17	+25	32	24	1
	11626	−15	+27	33	12	1
	11626	−14	+26	31	61	1
	11626	−13	+26	31	97	2
	11629	+43	−28	48	85	2
	11629	+47	−26	52	24	1
	11629	+48	−26	53	73	2
	11628	+41	+23	46	36	2
	11628	+44	+26	51	16	2
	11628	+46	+26	53	12	1
	11628	+48	+26	55	16	2
	11622	+46	−19	47	461	1
	11621	+55	+33	63	48	2
	11621	+56	+31	63	97	1
	11621	+57	+32	64	194	1
	11621	+58	+33	65	145	2
	11621	+63	+32	69	242	1
	11630	+69	−24	70	97	1
	11624	+74	+24	76	97	1
	(9)	(46)	(−2)		2430	36
20.612	11633	−61	−15	63	24	1
N−1	11632	−60	−23	63	36	2
	11632	−52	−19	54	121	2
	11627	−29	−25	36	145	2
	11627	−27	−24	35	61	1
	11627	−25	−23	32	170	1
	11627	−24	−26	34	145	2
	11627	−22	−24	30	194	1
	11627	−20	−23	28	73	1

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	11626	− 6	+27	30	121	2
	11626	− 5	+28	31	61	1
	11626	− 3	+25	26	73	1
	11626	− 3	+26	28	48	1
	11626	+ 1	+26	27	61	2
	11626	+ 2	+25	26	121	2
	11629	+54	−28	57	121	1
	11629	+61	−26	64	145	1
	11634	+56	+26	61	97	3
	11634	+59	+25	64	24	1
	11622	+60	−19	62	485	1
	11628	+68	+26	71	97	2
	11621	+70	+33	75	145	1
	11621	+71	+31	75	73	1
	11621	+77	+32	80	194	1
	(9)	(32)	(−2)		2835	34
21.519	11633	−47	−16	49	36	2
N−2	11636	−46	−24	50	73	2
	11632	−39	−19	42	32	1
	11627	−15	−26	28	109	3
	11627	−13	−24	25	48	3
	11627	−12	−26	26	24	1
	11627	−11	−23	24	145	5
	11627	−11	−26	26	24	3
	11627	−10	−26	26	97	1
	11627	− 8	−24	24	194	1
	11626	+ 6	+27	30	121	8
	11626	+ 6	+29	32	36	1
	11626	+ 9	+29	33	16	1
	11626	+10	+27	31	32	1
	11626	+10	+26	30	73	2
	11626	+14	+27	33	73	1
	11626	+15	+26	32	61	1
	11626	+15	+27	33	16	1
	11626	+16	+26	32	97	1
	11635	+36	+37	51	24	1
	11634	+68	+27	71	291	1
	11622	+72	−19	73	339	1
	11628	+73	+26	76	339	2
	11629	+76	−26	77	145	1
	(10)	(20)	(−2)		2445	45
22.507	11633	−36	−16	38	48	1
N−3	11636	−36	−21	40	85	2
	11636	−36	−22	40	32	2
	11636	−35	−24	40	12	1
	11636	−33	−21	36	73	1
	11632	−26	−18	30	16	1
	11627	− 5	−24	23	32	3
	11627	− 3	−26	25	24	3
	11627	− 1	−24	24	85	2
	11627	− 1	−25	25	97	4
	11627	+ 1	−25	25	48	3
	11627	+ 2	−24	24	61	4
	11627	+ 2	−23	23	12	1
	11627	+ 3	−23	23	36	1
	11627	+ 4	−24	24	194	2
	11626	+17	+27	34	24	4
	11626	+17	+30	35	12	1
	11626	+21	+30	36	24	1

MAY

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	11626	+22	+27	36	16	1
	11626	+26	+26	38	121	2
	11626	+27	+25	38	170	1
	11634	+80	+28	81	242	1
	11622	+85	−19	85	145	1
	(7)	(6)	(−2)		1609	43
23.567	11636	−22	−21	28	194	3
N−3	11636	−20	−21	26	61	2
	11636	−20	−24	30	32	1
	11636	−19	−25	30	16	1
	11636	−16	−20	24	145	1
	11636	−13	−21	24	16	1
	11632	−12	−18	20	12	1
	11627	+12	−23	25	16	1
	11627	+13	−24	26	170	5
	11627	+15	−24	26	61	2
	11627	+17	−24	28	194	1
	11627	+21	−22	27	12	2
	11626	+41	+26	47	291	2
	11635	+55	+40	65	16	1
	11635	+62	+38	69	97	2
	(5)	(352)	(−2)		1333	26
24.531	11640	−80	−17	80	48	1
N−4	11639	−71	−26	73	32	1
	11638	−28	−25	35	32	1
	11638	−26	−23	33	48	2
	11636	−11	−21	22	291	1
	11636	− 9	−20	21	145	2
	11636	− 7	−21	20	48	6
	11636	− 6	−24	24	12	1
	11636	− 5	−18	17	97	4
	11636	− 4	−18	17	145	3
	11636	− 4	−22	20	73	3
	11636	− 2	−18	16	242	6
	11627	+24	−21	30	6	1
	11627	+25	−23	32	97	2
	11627	+26	−23	33	48	6
	11627	+28	−23	34	32	2
	11627	+30	−24	36	194	1
	11626	+55	+26	61	291	1
	11635	+68	+41	74	32	1
	(7)	(340)	(−2)		1913	45
25.510	11641	−88	−17	88	339	1
N−3	11640	−69	−16	69	24	1
	11638	−15	−23	26	16	1
	11638	−13	−21	23	12	1
	11638	−12	−22	24	48	3
	11636	+ 2	−20	18	388	1
	11636	+ 3	−22	20	32	1
	11636	+ 4	−19	18	48	1
	11636	+ 4	−24	24	97	1
	11636	+ 5	−19	18	32	2
	11636	+ 5	−22	21	73	5
	11636	+ 6	−22	21	97	4
	11636	+ 6	−19	19	97	1
	11636	+ 7	−22	21	73	1
	11636	+ 7	−18	18	48	4
	11636	+ 8	−20	20	218	1
	11636	+ 9	−19	20	97	1
	11636	+11	−18	20	170	1
	11636	+12	−20	22	170	1
	11627	+37	−23	42	24	1
	11627	+39	−24	45	32	4
	11627	+44	−24	48	242	1
	11626	+68	+26	71	291	1
	(6)	(327)	(−1)		2668	39
26.694	11641	−71	−15	71	679	1
N−1	11640	−53	−16	54	61	1
	11638	− 1	−23	22	73	1
	11638	+ 2	−22	20	48	1
	11638	+ 3	−23	21	73	2
	11638	+ 5	−23	22	48	1
	11636	+17	−22	26	388	2
	11636	+19	−23	29	97	1
	11636	+19	−20	26	73	1
	11636	+22	−24	31	194	2
	11636	+24	−23	32	97	1
	11636	+25	−19	31	97	1
	11636	+26	−18	31	218	1
	11636	+27	−20	33	291	2
	11627	+60	−25	63	291	1
	(5)	(311)	(−1)		2728	19
27.576	11643	−87	+16	87	291	1
N−4	11641	−73	−17	73	48	1
	11641	−73	−16	73	48	2
	11641	−69	−17	69	194	2
	11641	−69	−16	69	170	2
	11641	−66	−15	67	32	3
	11641	−59	−14	60	533	2
	11642	−61	+34	67	32	3
	11642	−57	+32	64	32	2
	11640	−43	−16	45	12	2
	11640	−40	−15	43	16	1
	11638	+ 9	−23	23	36	6
	11638	+12	−23	25	24	2
	11638	+14	−22	25	16	6
	11638	+14	−21	24	12	2
	11638	+16	−23	26	16	2
	11636	+27	−21	34	339	7
	11636	+28	−24	35	48	1
	11636	+29	−23	35	48	4
	11636	+32	−25	38	145	3
	11636	+32	−24	37	12	3
	11636	+34	−19	36	16	2
	11636	+34	−23	39	24	2
	11636	+35	−17	37	6	1
	11636	+35	−19	38	97	5
	11636	+38	−20	42	97	1
	11636	+38	−18	41	339	4
	11627	+70	−26	73	242	1
	(7)	(299)	(−1)		2925	73
28.524	11645	−88	+22	88	339	1
N−5	11645	−80	+21	80	630	1
	11644	−75	+23	76	73	3

MAY

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	11643	−73	+15	75	242	2
	11641	−57	−20	59	145	2
	11641	−56	−19	57	61	3
	11641	−55	−17	56	36	2
	11641	−50	−17	53	24	2
	11641	−46	−14	46	6	1
	11641	−46	−13	46	6	1
	11641	−45	−16	46	533	1
	11642	−50	+30	56	48	2
	11642	−49	+32	56	16	2
	11642	−44	+29	53	61	1
	11640	−33	−18	36	24	5
	11640	−30	−17	34	24	5
	11640	−28	−17	32	24	1
	11640	−27	−16	31	12	1
	11638	+23	−23	30	36	2
	11638	+27	−22	34	12	1
	11638	+28	−22	34	16	1
	11638	+30	−22	35	6	1
	11636	+41	−20	44	194	2
	11636	+43	−22	46	48	4
	11636	+43	−20	46	73	3
	11636	+44	−22	47	48	1
	11636	+44	−21	47	97	3
	11636	+45	−21	48	48	4
	11636	+45	−23	49	145	1
	11636	+47	−20	51	24	2
	11636	+47	−18	50	16	1
	11636	+49	−17	51	48	2
	11636	+50	−18	53	61	2
	11636	+53	−16	54	485	3
	11627	+83	−23	83	194	1
	(9)	(287)	(−1)		3855	70
29.512	11645	−75	+20	76	145	1
N−3	11645	−74	+22	76	582	2
	11645	−66	+20	68	533	2
	11644	−65	+22	67	242	1
	11644	−60	+22	63	145	1
	11643	−59	+15	62	242	1
	11641	−44	−19	46	121	6
	11641	−41	−17	44	32	1
	11641	−39	−17	43	24	2
	11641	−36	−16	37	85	4
	11641	−33	−13	35	533	1
	11641	−32	−16	35	12	1
	11642	−36	+31	46	48	2
	11642	−29	+29	42	24	1
	11640	−18	−18	24	36	3
	11640	−16	−16	21	97	4
	11638	+36	−23	42	16	1
	11638	+40	−22	44	16	2
	11638	+43	−22	46	32	1
	11638	+44	−22	47	48	1
	11636	+54	−20	55	170	2
	11636	+56	−19	58	145	2
	11636	+56	−22	59	97	2
	11636	+59	−23	62	121	1
	11636	+59	−21	61	194	1
	11636	+64	−17	64	73	1

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	11636	+66	−16	66	582	3
	(8)	(274)	(−1)		4395	50
30.624	11647	−62	−13	62	32	2
N−2	11645	−60	+23	64	242	4
	11645	−57	+24	61	48	1
	11645	−52	+21	55	145	2
	11645	−52	+23	56	145	2
	11645	−50	+22	54	242	1
	11644	−49	+23	54	194	1
	11644	−45	+23	50	121	1
	11643	−44	+16	46	291	3
	11641	−30	−19	34	121	1
	11641	−23	−16	26	32	1
	11641	−22	−16	26	73	1
	11641	−17	−15	22	533	3
	11642	−24	+31	38	36	1
	11640	− 2	−16	16	12	1
	11640	0	−16	15	36	1
	11646	+48	+23	53	24	2
	11646	+53	+24	57	12	1
	11638	+59	−21	61	36	2
	11638	+66	−20	67	73	1
	11638	+70	−19	71	194	1
	11638	+71	−23	73	73	2
	11638	+71	−21	72	291	1
	11636	+80	−17	80	485	1
	(10)	(259)	(−1)		3491	37
31.506	11648	−76	+24	78	242	1
N−4	11647	−51	−14	53	12	1
	11645	−47	+23	52	194	3
	11645	−47	+21	51	73	3
	11645	−46	+21	51	97	1
	11645	−46	+23	51	61	1
	11645	−45	+23	50	12	1
	11645	−41	+21	45	36	3
	11645	−40	+22	46	145	3
	11645	−40	+19	44	36	3
	11645	−37	+21	43	218	1
	11645	−35	+22	41	121	4
	11644	−36	+23	42	121	2
	11644	−33	+23	40	109	1
	11643	−32	+16	36	194	2
	11641	−18	−19	25	85	1
	11641	−16	−18	23	12	1
	11641	−16	−19	24	24	4
	11641	−10	−16	17	12	3
	11641	− 9	−16	17	24	2
	11641	− 6	−13	14	48	6
	11641	− 6	−16	16	133	3
	11641	− 5	−15	15	364	2
	11640	+ 9	−18	19	32	2
	11640	+12	−17	20	48	5
	11640	+13	−16	19	16	1
	11638	+80	−18	80	32	1
	(8)	(247)	(−1)		2501	61

Mean for 31 days, $A = 2812$, $r = 137.7$

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